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(54) **PROFILED ELEMENT FOR LAYING RAISED FLOORS, AND RAISED FLOOR COMPRISING SUCH PROFILED ELEMENT**

PROFILELEMENT ZUM LEGEN VON DOPPELBÖDEN UND DOPPELBODEN MIT SOLCH EINEM PROFILELEMENT

ÉLÉMENT PROFILÉ SERVANT À POSER DES PLANCHERS SURÉLEVÉS ET PLANCHER SURÉLEVÉ COMPRENANT UN TEL ÉLÉMENT PROFILÉ

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(56) References cited:  
**WO-A1-2008/088886 DE-U1- 8 815 671**  
**DE-U1-202004 018 996 DE-U1-202009 013 314**  
**DE-U1-202009 013 314**

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## Description

**[0001]** The present invention relates to a profiled element for laying raised floors, and a raised floor that comprises such profiled element.

**[0002]** Nowadays, for laying raised floors, supports are used which are placed on the ground, such as posts, on which are laid tiles or other covering elements; at the perimetric edges, in order to hide the gap underneath the covering or flooring, today longitudinally-extended profiled elements with a T-shaped cross-section are adopted, which comprise a first flat portion that extends longitudinally, which rests on a plurality of lifting posts, and a second flat portion that extends longitudinally in the same direction as the first portion and which is arranged perpendicular to the arrangement of the first portion, and which, with it, defines the aforementioned T-shaped cross-section.

**[0003]** The second flat portion extends, upward from below in a configuration for use, to cover from view what is arranged below the covering or flooring, as well as the lateral surface of the perimeter of the covering or flooring proper.

**[0004]** Such solution has a rather unappealing visual impact when the raised floor has a perimetric step in which the vertical part is constituted by elements of the same covering as the floor, only arranged vertically, since such vertical covering elements are partially covered by the second, vertical portion of the T-shaped profiled element.

**[0005]** An alternative that is known and widespread today entails locking the vertical covering elements in place with clip fasteners; such system with clips, although more discreet and therefore preferable from the point of view of visual impact, entail placing at least one clip for each vertical covering element, with consequent time and cost for mounting the clips on the supports and then mounting the vertical covering elements on the clips.

**[0006]** DE 20 2004 018 996 U1, DE 202009 01331 4 U1, DE 8815671 U1 and WO 2008/088886 all disclose profiled elements.

**[0007]** The aim of the present invention is to provide a profiled element for laying raised floors which is capable of overcoming the limitations of conventional systems for covering the sides of raised floors.

**[0008]** Within this aim, an object of the present invention is to provide a raised floor that comprises such profiled element.

**[0009]** Another object of the present invention is to provide a profiled element that is easy to lay and intuitive to use.

**[0010]** Another object of the present invention is to provide a profiled element that allows the easy fixing of vertical covering elements.

**[0011]** This aim and these and other objects which will become better evident hereinafter are achieved by a profiled element for laying raised floors according to claim 1 and by a raised floor that comprises such profiled ele-

ment according to claim 10.

**[0012]** Further characteristics and advantages of the invention will become better apparent from the description of two preferred, but not exclusive, embodiments of the profiled element according to the invention, which are illustrated by way of non-limiting example in the accompanying drawings wherein:

- Figure 1 is a cross-sectional view of a profiled element according to the invention in a first embodiment thereof;
- Figure 2 shows the profiled element in Figure 1 applied to a raised floor;
- Figure 3 is a cross-sectional view of a profiled element according to the invention in a second embodiment thereof;
- Figure 4 shows the profiled element in Figure 3 applied to a raised floor;
- Figures 5 to 7 each show a step of laying a raised floor according to the invention.

**[0013]** With reference to the figures, a profiled element for laying raised floors according to the invention is generally designated in a first embodiment thereof with the reference numeral 10.

**[0014]** Such profiled element 10 comprises a first flat portion 11 that extends longitudinally and a second flat portion 12 that extends longitudinally in the same direction as the first portion 11 and which is arranged transversely with respect to the arrangement of the first portion 11.

**[0015]** The second flat portion 12 extends downward from the first portion 11, with respect to a configuration for use.

**[0016]** Grip protrusions 13 are defined on the second flat portion 12, for an adhesive for coverings or floors.

**[0017]** On the first portion 11 openings 46 can be defined for better outflow of water.

**[0018]** Such adhesive for coverings or floors is, for example, a cement adhesive of conventional type, such as silicone or other suitable types available on the market.

**[0019]** In such exemplary embodiment, which is obviously non-limiting of the invention, the second flat portion 12 is perpendicular to the first flat portion 11 and defines with it a substantially L-shaped cross-section.

**[0020]** The protrusions 13 are constituted by a series of flat longitudinal ribs, which protrude outward with respect to a laying configuration and are inclined with respect to the arrangement of the second portion 12.

**[0021]** The inclination of each raised portion 13 is at an identical angle to, and in the opposite direction from, another nearby protrusion 13.

**[0022]** Such protrusions 13 have the same height 14 as the second flat portion 12.

**[0023]** Such profiled element 10 also comprises a flange 15 of the first portion 11, which therefore has the same arrangement, which protrudes beyond the line 16 for connection with the second portion 12.

**[0024]** Such flange 15 extends beyond the connecting line 16 for a length that corresponds to the height 14 of the protrusions 13.

**[0025]** The function of such flange 15 is to contain an adhesive for coverings or for floors.

**[0026]** Figure 2 shows a cross-section of a profiled element 10 applied to a raised floor.

**[0027]** The first portion 11 of the profiled element 10 is laid on a supporting post 41, while the second portion 12 is covered with adhesive 19.

**[0028]** A horizontal flooring or covering element 20, for example a tile, is laid on the first portion 11, while a vertical flooring or covering element 21 is laid on the adhesive 19 on the second portion 12; such vertical flooring or covering element can be constituted by a part of a tile identical to the horizontal flooring or covering element 20, conveniently cut so that it descends to ground level 22, so as to optimally conceal the gap 23 defined below the raised floor.

**[0029]** In Figure 3, a profiled element for laying raised floors according to the invention is generally designated in a second embodiment thereof with the reference numeral 110.

**[0030]** The profiled element 110 comprises a first flat portion 111 that extends longitudinally and a second flat portion 112 that extends longitudinally in the same direction as the first portion 111 and is arranged transversely with respect to the arrangement of the first portion 111.

**[0031]** Grip protrusions 113 are defined on the second flat portion 112, for an adhesive for coverings or floors.

**[0032]** In such exemplary embodiment, which is obviously non-limiting of the invention, the second flat portion 112 is perpendicular to the first flat portion 111 and defines with it a substantially L-shaped cross-section.

**[0033]** The protrusions 113 are similar to the protrusions 13 described above.

**[0034]** The profiled element 110 also comprises a flange 115 of the first portion 111, which therefore has the same arrangement, which protrudes beyond the line 116 for connection with the second portion 112.

**[0035]** From the free end of the flange 115 a longitudinal edge 126 extends upward, with respect to a configuration for use, to cover and protect a lateral face 127 of a horizontal flooring or covering element 120 that is adjacent to the longitudinal edge 126.

**[0036]** The longitudinal edge 126 is, for example, perpendicular to the flange 115.

**[0037]** It should be understood that the longitudinal edge 126 can also have a different cross-section, for example curved, shaped like a circular arc, or like an inverted U, and knurled in an upper region in order to define an anti-slip edge, and other, similar cross-sections.

**[0038]** The flange 115 extends beyond the connection line 116 for a length such as to affect the thickness 125 of a vertical flooring or covering element 121.

**[0039]** The longitudinal edge for covering and protection 126 provides the protection of the lateral face 127 of the horizontal flooring or covering element 120 against

unwanted shocks that could damage the lateral face 127 which, if chipped, would be disfigured from the point of view of the visual impact.

**[0040]** The longitudinal edge 126 has a height that corresponds to the thickness of the horizontal flooring or covering element 120, so as to protect it without presenting an obstacle to walking.

**[0041]** Figure 4 shows a cross-section of a profiled element 110 applied to a raised floor.

**[0042]** The first portion 111 of the profiled element 110 is laid on a supporting post 41, while the second portion 112 is covered with adhesive 19.

**[0043]** A horizontal flooring or covering element 120, for example a tile, is laid on the first portion 111, while a vertical flooring or covering element 121 is laid on the adhesive 19 on the second portion 112; such vertical flooring or covering element can be constituted by a part of a tile identical to the horizontal flooring or covering element 120, conveniently cut so that it descends to ground level 22, so as to optimally conceal the gap 23 defined below the raised floor.

**[0044]** The invention also relates to a raised floor 40 that comprises a profiled element 10 or 110 according to the invention.

**[0045]** The raised floor 40, which is shown schematically in Figure 7, comprises an array of lifting supports 18, for example posts, that comprises perimetric lifting supports 41 on which profiled elements 10 as described above are placed, one for each side 42 and 43 of the perimeter of the raised floor 40 that is intended to remain exposed.

**[0046]** The raised floor 40 comprises:

- horizontal flooring or covering elements 44, of which the perimetric horizontal flooring or covering elements 20 are adapted to be placed with one edge surmounting the first flat portion 11 of the profiled element 10,
- vertical flooring or covering elements 21, which are fixed to the second flat portion 12 of the profiled element 10 by way of adhesive 19.

**[0047]** Figure 5 shows a step of laying a raised floor 40 according to the invention, in which on the ordered array of lifting supports, i.e. the posts 18, the profiled elements 10 according to the invention, conveniently cut at the corners in order to fit together without overlapping, are placed perimetrically.

**[0048]** Figure 6 shows a subsequent step, in which the central and perimetric horizontal flooring or covering elements 44 and 22 respectively are placed and the adhesive 19 for the application of the vertical flooring or covering elements 21 is placed on the second longitudinal portions 12 of the profiled elements 10.

**[0049]** Figure 7 shows a finished raised floor 40.

**[0050]** In practice it has been found that the invention fully achieves the intended aim and objects.

**[0051]** In particular, with the invention a profiled ele-

ment has been devised that is easy to lay and intuitive to use, and which allows the easy fixing of vertical flooring or covering elements simply by using conventional adhesives for coverings or floors, placed on the second longitudinal portion of the profiled element, without using clips or other inconvenient coupling systems that remain in view.

**[0052]** Therefore with the invention a profiled element has been devised that, once the raised floor is completed, disappears completely from view, thus optimizing the visual impact of the raised floor.

**[0053]** With the invention a raised floor has also been devised which comprises such a profiled element.

**[0054]** The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims. Moreover, all the details may be substituted by other, technically equivalent elements within the scope of the invention.

**[0055]** In practice the components and the materials employed, provided they are compatible with the specific use, and the contingent dimensions and shapes, may be any according to requirements and to the state of the art.

**[0056]** Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

## Claims

1. A profiled element (10, 110) for laying raised floors, comprising a first flat portion (11, 111) that extends longitudinally and a second portion (12, 112) that extends longitudinally in the same direction as said first portion and is arranged transversely with respect to the arrangement of said first portion (11, 111), grip protrusions (13, 113) for an adhesive for coverings or floors being defined on said second portion (12, 112), **characterized in that** the second portion is a second flat portion (12, 112), **in that** the protrusions (13, 113) are constituted by a series of flat longitudinal ribs, which protrude outward with respect to a laying configuration and are inclined with respect to the arrangement of the second portion (12, 112), and further comprising a flange (15, 115) of said first portion (11, 111), which extends in prolongation of the first portion and protrudes beyond a line (16, 116) for connection with the second portion (12, 112).
2. The profiled element according to claim 1, **characterized in that** said second flat portion (12) is perpendicular to the first flat portion (11) and defines with it a substantially L-shaped cross-section.
3. The profiled element according to one or more of the preceding claims, **characterized in that** openings (46) for better outflow of water are provided on the first portion (11).
4. The profiled element according to claim 1, **characterized in that** said flange (15) extends beyond the connection line (16) for a length that corresponds to a height (14) of the protrusions (13).
5. The profiled element according to one or more of the preceding claims, **characterized in that** it comprises a longitudinal edge (126) extending upward from a free end of said flange (115) of said first portion (111) to cover and protect a lateral face (127) of a horizontal flooring or covering element (120) that is adjacent to said longitudinal edge (126).
6. The profiled element according to claim 5, **characterized in that** said longitudinal edge (126) is perpendicular to the flange (115).
7. The profiled element according to claims 5 or 6, **characterized in that** said longitudinal edge (126) has a curved cross-section, shaped like a circular arc or like an inverted U, and knurled in an upper region in order to define an anti-slip edge.
8. A set comprising a profiled element according to one of claims 5 to 7 and a flooring or covering element, **characterized in that** said flange (115) extends beyond the connection line (116) for a length such as to affect a thickness (125) of a vertical flooring or covering element (121).
9. The set according to claim 8, **characterized in that** said longitudinal edge (126) has a height that corresponds to a thickness of a horizontal flooring or covering element (120).
10. A raised floor (40), at least one side (42, 43) of the perimeter of the raised floor (40) being intended to remain exposed, **characterized in that** it comprises:
  - an array of lifting supports (18), among which are perimetric lifting supports (41),
  - on which profiled elements (10) according to one or more of the preceding claims are placed, one for each side (42, 43) of the perimeter of the raised floor (40) that is intended to remain exposed,
  - horizontal flooring or covering elements (44), of which the perimetric horizontal flooring or covering elements (20) are adapted to be placed with one edge surmounting the first flat portion (11) of the profiled element (10),
  - vertical flooring or covering elements (21), which are fixed to the second flat portion (12) of the profiled element (10) by way of adhesive

(19).

### Patentansprüche

1. Profilelement (10, 110) zum Verlegen von Doppelböden, umfassend einen ersten flachen Abschnitt (11, 111), der sich längs erstreckt, und einen zweiten Abschnitt (12, 112), der sich längs in die gleiche Richtung wie der erste Abschnitt erstreckt und quer zur Anordnung des ersten Abschnitts (11, 111) angeordnet ist, wobei auf dem zweiten Abschnitt (12, 112) Greifvorsprünge (13, 113) für einen Klebstoff für Beläge oder Böden definiert sind, **dadurch gekennzeichnet, dass** der zweite Abschnitt ein zweiter flacher Abschnitt (12, 112) ist, dass die Vorsprünge (13, 113) von einer Reihe flacher Längsrippen gebildet werden, die bezüglich einer Verlegekonfiguration nach außen vorstehen und bezüglich der Anordnung des zweiten Abschnitts (12, 112) geneigt sind, und ferner dass es auch einen Flansch (15, 115) des ersten Abschnitts (11, 111) umfasst, der sich in der Verlängerung des ersten Abschnitts erstreckt und über eine Linie (16, 116) hinaus zur Verbindung mit dem zweiten Abschnitt (12, 112) vorsteht.
2. Profilelement nach Anspruch 1, **dadurch gekennzeichnet, dass** der zweite flache Abschnitt (12) senkrecht zum ersten flachen Abschnitt (11) ist und mit diesem einen im Wesentlichen L-förmigen Querschnitt definiert.
3. Profilelement nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** am ersten Abschnitt (11) Öffnungen (46) zum besseren Abfließen von Wasser vorgesehen sind.
4. Profilelement nach Anspruch 1, **dadurch gekennzeichnet, dass** sich der Flansch (15) über die Verbindungslinie (16) hinaus über eine Länge erstreckt, die einer Höhe (14) der Vorsprünge (13) entspricht.
5. Profilelement nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** es eine Längskante (126) umfasst, die sich von einem freien Ende des Flansches (115) des ersten Abschnitts (111) aufwärts erstreckt, um eine Seitenfläche (127) eines horizontalen Boden- oder Belagselements (120), die an die Längskante (126) angrenzt, zu bedecken und zu schützen.
6. Profilelement nach Anspruch 5, **dadurch gekennzeichnet, dass** die Längskante (126) senkrecht zum Flansch (115) ist.
7. Profilelement nach Anspruch 5 oder 6, **dadurch ge-**

**kennzeichnet, dass** die Längskante (126) einen gekrümmten, kreisbogenförmigen oder umgekehrten U-förmigen und in einem oberen Bereich gerändelten Querschnitt aufweist, um eine rutschfeste Kante zu definieren.

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8. Set, umfassend ein Profilelement nach einem der Ansprüche 5 bis 7, und ein Boden- oder Belagselement, **dadurch gekennzeichnet, dass** sich der Flansch (115) über die Verbindungslinie (116) hinaus über eine Länge erstreckt, um eine Dicke (125) eines vertikalen Boden- oder Belagselements (121) zu bewirken.

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9. Set nach Anspruch 8, **dadurch gekennzeichnet, dass** die Längskante (126) eine Höhe hat, die einer Dicke eines horizontalen Boden- oder Belagselements (120) entspricht.

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10. Doppelboden (40), wobei mindestens eine Seite (42, 43) des Umfangs der Doppelbodens freiliegend bleiben soll, **dadurch gekennzeichnet, dass** er:

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- eine Reihe von Hubstützen (18), darunter Hubstützen (41) am Umfang,

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- auf denen Profilelemente (10) nach einem oder mehreren der vorhergehenden Ansprüche angeordnet sind, eines für jede Seite (42, 43) des Umfangs des Doppelbodens (40), die freiliegend bleiben soll,

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- horizontale Boden- oder Belagselemente (44), von denen die horizontalen Boden- oder Belagselemente (20) am Umfang so ausgelegt sind, dass sie mit einer Kante den ersten flachen Abschnitt (11) des Profilelements (10) überragend angeordnet sind,

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- vertikale Boden- oder Belagselemente (21), die mittels Klebstoff (19) am zweiten flachen Abschnitt (12) des Profilelementes (10) befestigt sind, umfasst.

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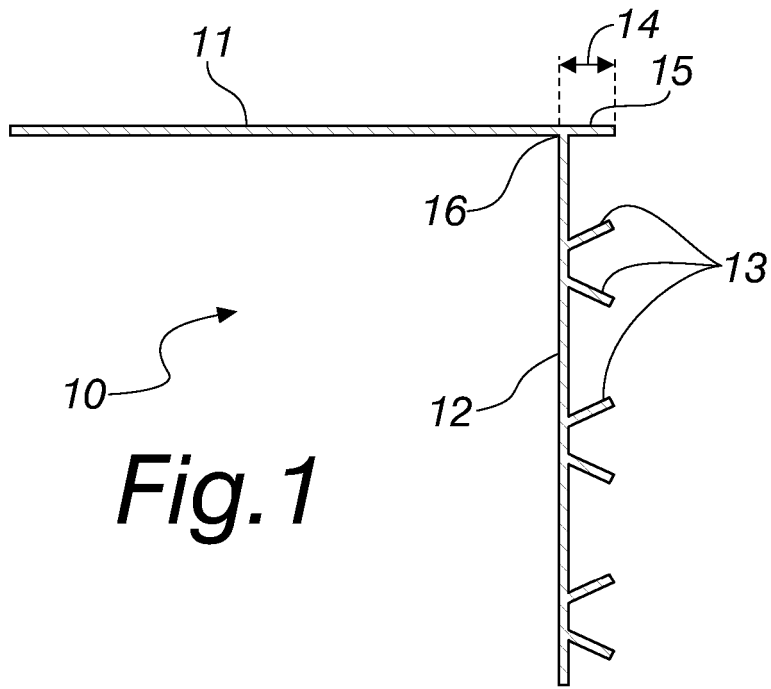
### Revendications

1. Élément profilé (10, 110) pour poser des planchers surélevés, comportant une première partie plate (11, 111) qui s'étend longitudinalement et une seconde partie (12, 112) qui s'étend longitudinalement dans la même direction que ladite première partie et est agencée transversalement par rapport à l'agencement de ladite première partie (11, 111), des saillies de prise (13, 113) pour un adhésif pour des revêtements ou des planchers étant définies sur ladite seconde partie (12, 112), **caractérisé en ce que** la seconde partie est une seconde partie plate (12, 112), **en ce que** les saillies (13, 113) sont constituées d'une série de nervures longitudinales plates, qui

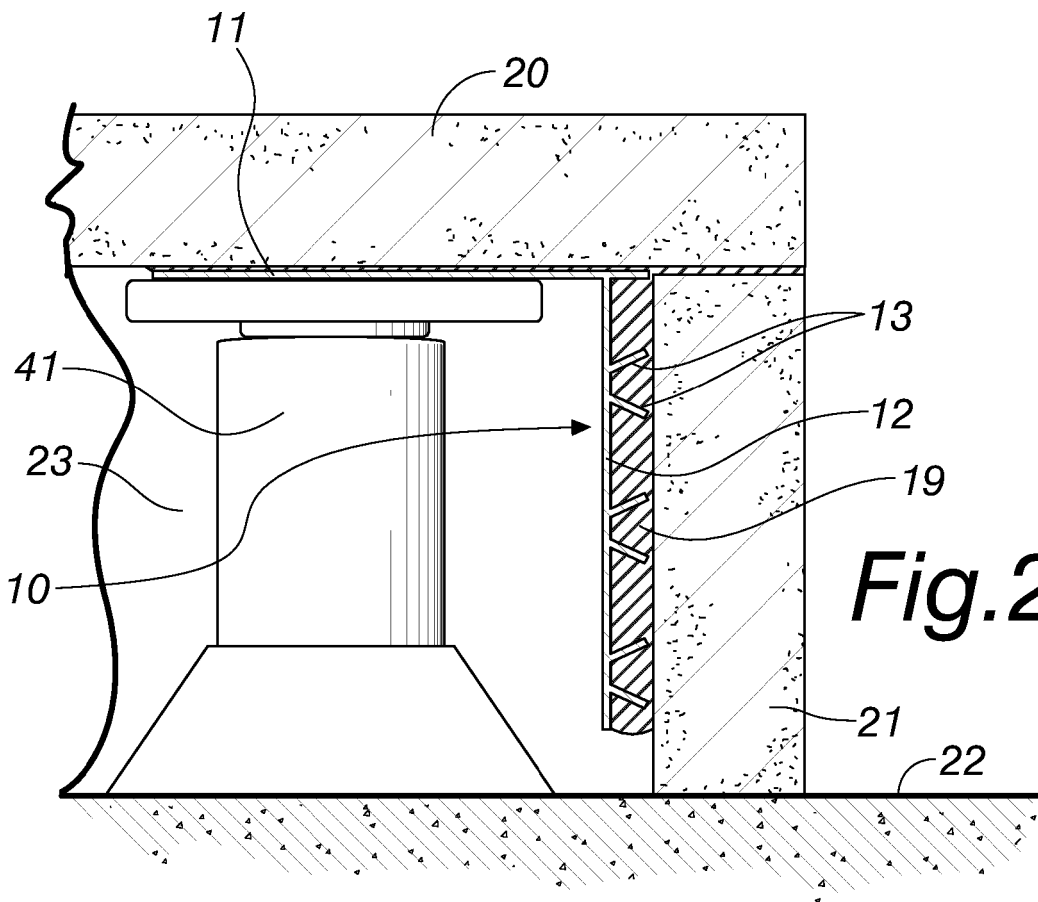
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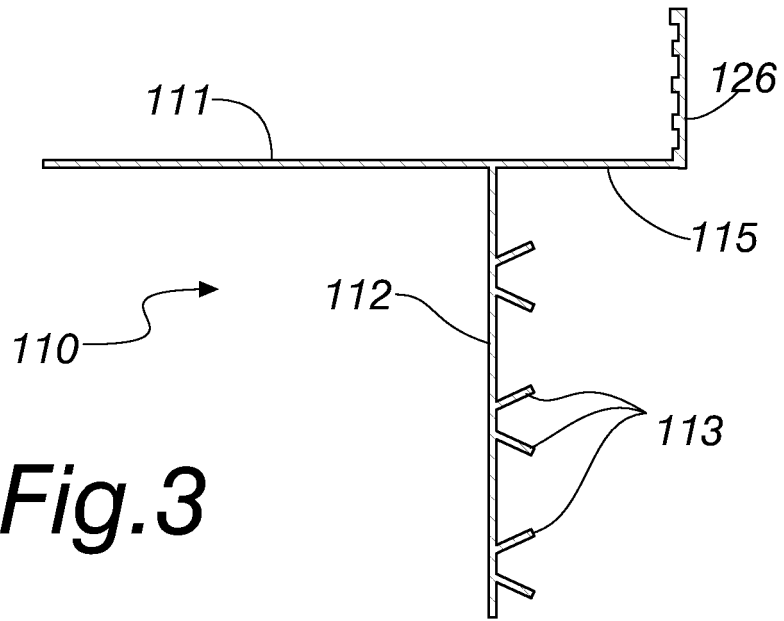
- font saillie vers l'extérieur par rapport à une configuration de pose et sont inclinées par rapport à l'agencement de la seconde partie (12, 112), et comportant en outre un rebord (15, 115) de ladite première partie (11, 111), qui s'étend en prolongement de la première partie et fait saillie au-delà d'une ligne (16, 116) en vue d'un assemblage avec la seconde partie (12, 112).
2. Élément profilé selon la revendication 1, **caractérisé en ce que** ladite seconde partie plate (12) est perpendiculaire à la première partie plate (11) et définit avec elle une section transversale sensiblement en forme de L.
  3. Élément profilé selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** des ouvertures (46) pour un meilleur écoulement de sortie d'eau sont prévues sur la première partie (11).
  4. Élément profilé selon la revendication 1, **caractérisé en ce que** ledit rebord (15) s'étend au-delà de la ligne d'assemblage (16) sur une longueur qui correspond à une hauteur (14) des saillies (13).
  5. Élément profilé selon une ou plusieurs des revendications précédentes, **caractérisé en ce qu'il** comporte un bord longitudinal (126) s'étendant vers le haut à partir d'une extrémité libre dudit rebord (115) de ladite première partie (111) pour recouvrir et protéger une face latérale (127) d'un élément de plancher ou de revêtement horizontal (120) qui est adjacent audit bord longitudinal (126).
  6. Élément profilé selon la revendication 5, **caractérisé en ce que** ledit bord longitudinal (126) est perpendiculaire au rebord (115).
  7. Élément profilé selon les revendications 5 ou 6, **caractérisé en ce que** ledit bord longitudinal (126) a une section transversale incurvée, formée comme un arc circulaire ou analogue à un U inversé, et moulée dans une zone supérieure afin de définir un bord anti-glissement.
  8. Ensemble comportant un élément profilé selon l'une des revendications 5 à 7 et un élément de plancher ou de revêtement, **caractérisé en ce que** ledit rebord (115) s'étend au-delà de la ligne d'assemblage (116) sur une longueur telle qu'elle affecte une épaisseur (125) d'un élément de plancher ou de revêtement vertical (121).
  9. Ensemble selon la revendication 8, **caractérisé en ce que** ledit bord longitudinal (126) a une hauteur qui correspond à une épaisseur d'un élément de plancher ou de revêtement horizontal (120).
  10. Plancher surélevé (40), au moins un côté (42, 43) du périmètre du plancher surélevé (40) étant destiné à rester exposé, **caractérisé en ce qu'il** comporte
    - un réseau de supports de levage (18), parmi lesquels figurent des supports de levage périmétriques (41),
    - sur lequel des éléments profilés (10) selon une ou plusieurs des revendications précédentes sont placés, un pour chaque côté (42, 43) du périmètre du plancher surélevé (40) qui est destiné à rester exposé, - des éléments de plancher ou de revêtement horizontaux (44), dont les éléments de plancher ou de revêtement horizontaux périmétriques (20) sont adaptés pour être placés avec un bord surmontant la première partie plate (11) de l'élément profilé (10),
    - des éléments de plancher ou de revêtement verticaux (21), qui sont fixés à la seconde partie plate (12) de l'élément profilé (10) au moyen d'un adhésif (19) .



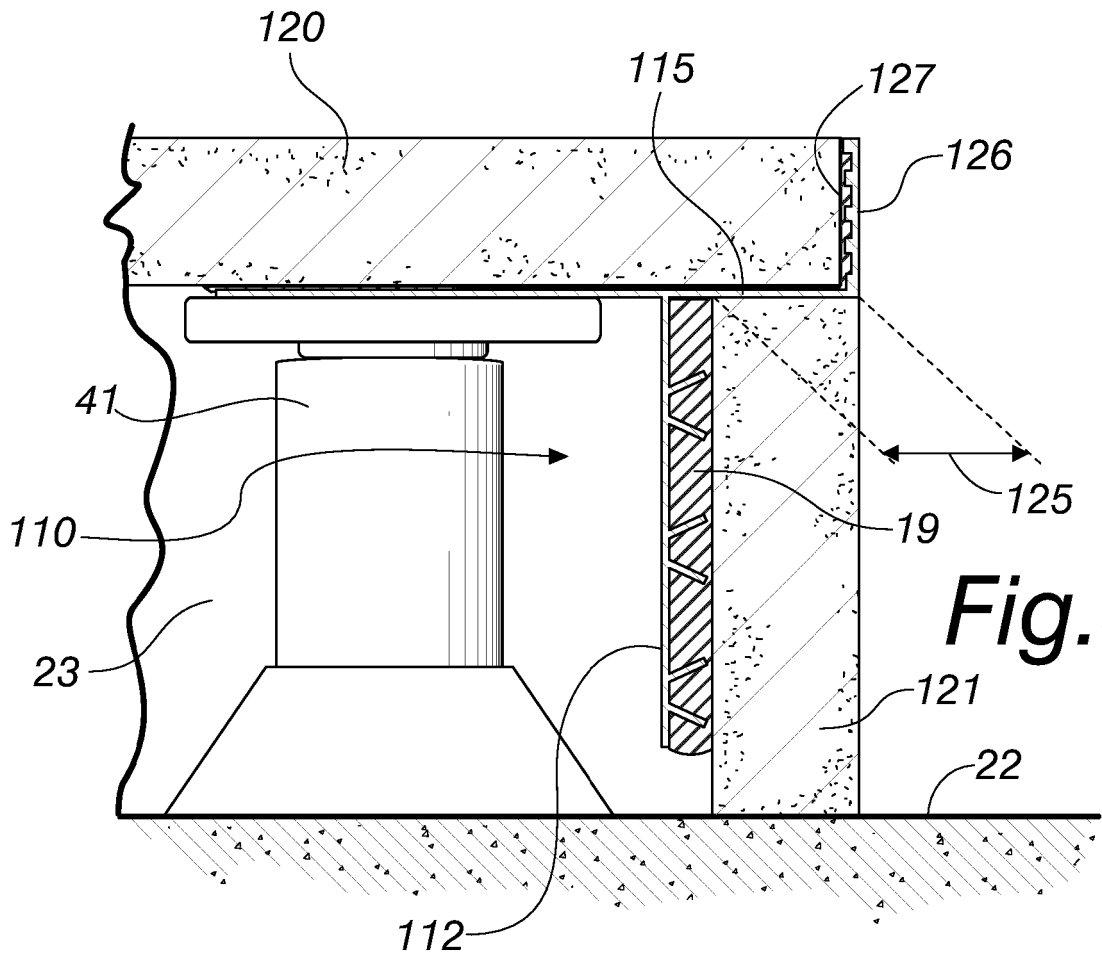
**Fig. 1**



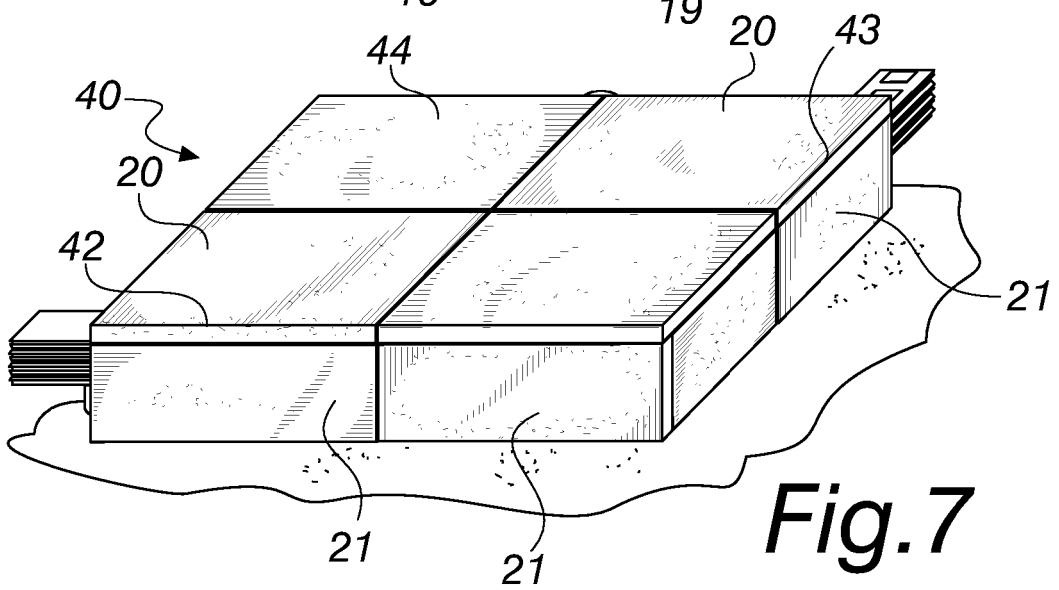
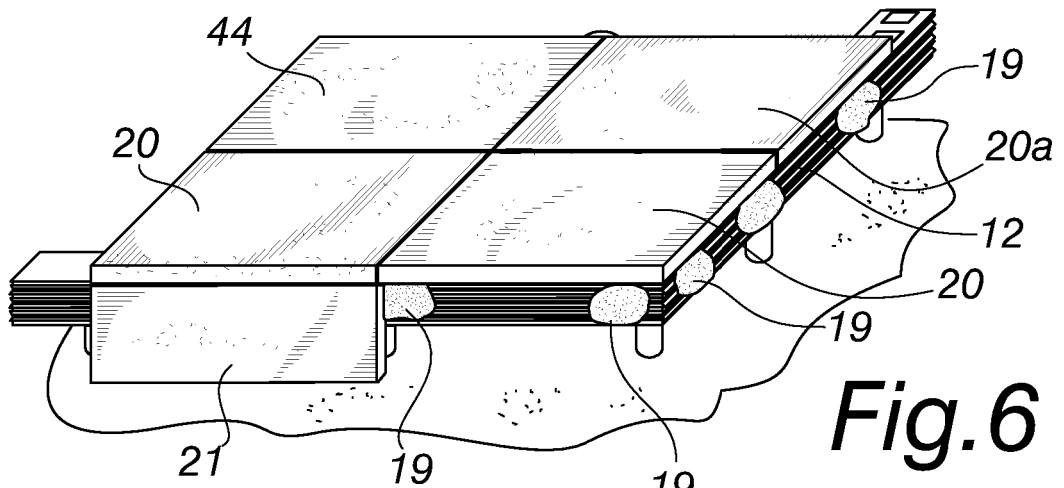
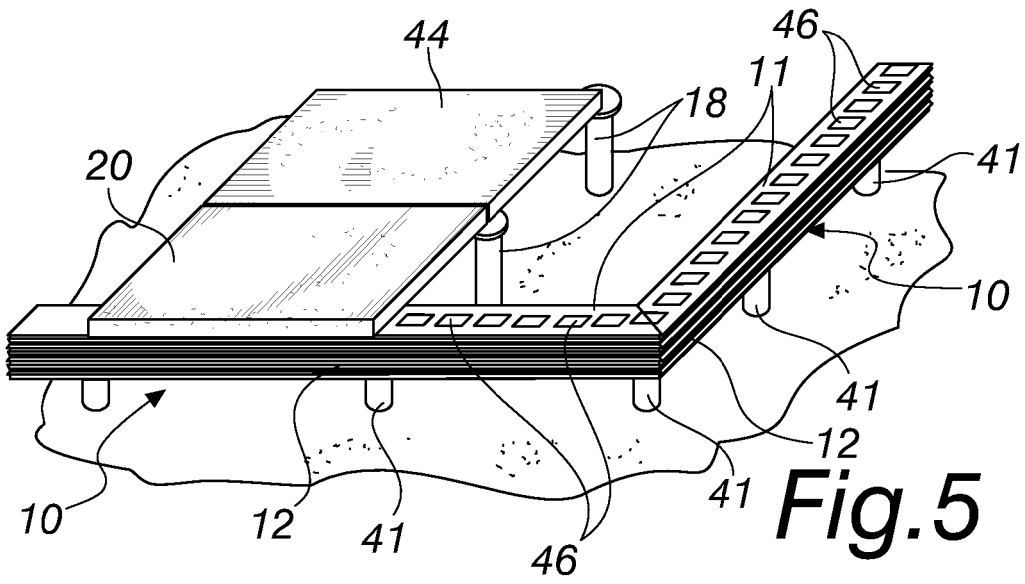
**Fig. 2**



**Fig.3**



**Fig.4**



**REFERENCES CITED IN THE DESCRIPTION**

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**Patent documents cited in the description**

- DE 202004018996 U1 [0006]
- DE 202009013314 U1 [0006]
- DE 8815671 U1 [0006]
- WO 2008088886 A [0006]